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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,486	12/10/2004	Kazumasa Ohnishi	740709-530	6128
22204	7590	03/07/2006	EXAMINER	
NIXON PEABODY, LLP 401 9TH STREET, NW SUITE 900 WASHINGTON, DC 20004-2128			ROST, ANDREW J	
			ART UNIT	PAPER NUMBER
			3751	

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/517,486

Applicant(s)

OHNISHI, KAZUMASA

Examiner

Andrew J. Rost

Art Unit

3751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 05/27/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Drawings***

2. Figures 1-4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

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As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
  - (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
  - (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
  - (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
  - (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
  - (f) BACKGROUND OF THE INVENTION.
    - (1) Field of the Invention.
    - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
  - (g) BRIEF SUMMARY OF THE INVENTION.
  - (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
  - (i) DETAILED DESCRIPTION OF THE INVENTION.
  - (j) CLAIM OR CLAIMS (commencing on a separate sheet).
  - (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
  - (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).
3. The disclosure contains the following informalities:
- Page 15, lines 28-29, "electro-magnets a, b, c" should be --electro-magnets 59a, 59b, 59c--;
- Page 16, line 9, "electro-magnets a, b, c" should be --electro-magnets 59a, 59b, 59c--;

Page 16, line 20, "electro-magnets 59a, 59b, c" should be --electro-magnets 59a, 59b, 59c--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Lo et al. (5,662,144).

Regarding claim 1, Lo et al. disclose a flexible tube (10) having a plurality of projections (projections 12 and 14 shown) on the interior that aid in occluding flow in the tubing when pressure is applied to the outside of the tubing (col. 1, lines 8-12).

In regards to claim 2, Lo et al. disclose that more than two members can be provided (Col. 3, lines 60-62). Thus, Lo et al.'s device can have at least three projections.

In regards to claim 3, Lo et al. disclose projections (12, 14) having sides (Figure 3) and more than two projections can be provided in the interior of the tubing, with the inner wall (where additional projections would be provided) contacting the side of the projections (12, 14).

In regards to claims 4-7, Lo et al. disclose a flexible tube having a plurality of projections with a pair (12, 14) that are have plane-symmetry with respect to the axis of

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the flexible tube having substantially arched sides and that more than two projections can be provided in the interior of the tubing (Figure 3).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lo et al. in view of Grapes (6,554,589).

Regarding claim 8, Lo et al. disclose a flexible tube (10) having a plurality of projections (projections 12 and 14 shown) on the interior that aid in occluding flow in the tubing when pressure is applied to the outside of the tubing. Lo et al. do not disclose a restriction member and a tube pressing member. However, Grapes teaches a restriction member (housing 11 restricts the widthwise expansion of the tube as shown in Figure 3) and a tube pressing member (13c) that closes a flexible tube with a housing that limits lateral movement (col. 1, lines 40-41). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to place the flexible tube of Lo et al. in the housing with tube pressing member as taught by Grapes in order to actuate and close the flexible tube and to limit the lateral movement of the flexible tube.

8. Claims 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lo et al. in view of Grapes as applied to claims 8-14 above, and further in view of Harper (2,412,397).

Regarding claim 15, the modified Lo et al. reference does not disclose two or more pressing members arranged along the axis of the tube. However, Harper teaches multiple actuators for a flexible tube valve (cams 30, 32, 34 pushes followers 31, 33, 35 in order to pinch a flexible tube to a closed position as shown in Figure 1) in order to operate a flexible tube pump (col. 1, lines 3-11). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to place the modified Lo et al. device with multiple pressing members in a row along the tube axis as taught by Harper in order to actuate the flexible tube as a pump.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Swick (3,624,800) discloses a collapsible tube. Gillespie et al. (5,265,840) disclose a flexible tube with a restriction member and a pressing member. Berlin (4,106,508) discloses a clamp with a restriction member. Legeay et al. disclose a deformable flexible structure. Schrock (3,720,235) discloses a collapsible tube with internal projections. Zeman (5,292,073) discloses a tube with internal trapezoidal projections. Mauch (3,508,587) discloses tubular structural member having various internal projections including trapezoidal projections with arched sides.

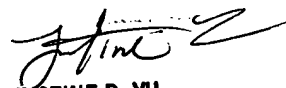
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew J. Rost whose telephone number is 571-272-2711. The examiner can normally be reached on 7:30-5 M-Th and 7:30-5 every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on 571-272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Andrew J Rost  
Examiner  
Art Unit 3751



JUSTINE R. YU  
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2/24/06